CLAIMS



1. A device for processing (30) information in a database (5), comprising:

- means for the selection (31) of data of the database (5) according to selection criteria,
- and means for arranging (32) said selected data in a representation space (40) provided for the attention of at least one user, said space (40) comprising a plurality of positions which can receive elements that are representative of the data,

characterized in that it comprises:

- means for pre-defining (33) at least one related representation area (A, A') within said representation space (40), formed by activated positions,
- means for specifying (34) at least one data bootstrapping element for each of said related areas (A, A'),
- means for positioning (35) said bootstrapping element at a bootstrapping position (P, P') in said related area (A, A') corresponding to said element,
- means for successively determining (36) new data elements from at least one data element already positioned in said related area (A, A'), in accordance with at least one proximity order relation based on contents of said data,
- and means for successively positioning (37) of at least a part of said new data elements in said related area (A, A'), at positions neighboring the positions occupied by the data elements already positioned, if these position not be already occupied by elements already positioned,

said selection means (31) including the initial specification (34) and successive determination (36) means, and said arrangement means (32) including the predefinition (33), bootstrapping element positioning (35) and successive positioning (37) means.

The information processing device (30) as claimed in claim 1, characterized in that said successive determination (36) and successive positioning (37) means are provided to form neighborhood cards (NEIGH2) centered on said elements already positioned, each of said neighborhood cards (NEIGH2) centered on one of said elements (Fi) already positioned giving elements neighboring said element in accordance with said proximity order relation, and to select said new elements from said neighboring elements and to place them in said related area (A2) corresponding to said element (Fi) already positioned at positions neighboring said element.

2. The information processing device (30) as claimed in claim 2, characterized in that said successive determination (36) and successive positioning (37) means are provided to place said neighboring elements at positions relative to said element (Fi) in said related area (A2), which correspond to the positions relative to said element (Fi) of said neighboring elements in said neighborhood card (NEIGH2).

3. The information processing device (30) as claimed in claims 2 or 3, characterized in that said successive determination (36) and successive positioning (37) means are provided to supply said neighborhood cards (NEIGH) to representation means (11) for the attention of said user.

4. The information processing device (30) as claimed in any one of the preceding claims, characterized in that said successive determination means (36) are provided to exclude from the new data elements, said data elements already positioned, so as to represent, at the most once, each of said data elements in said representation space (40).

5. The information processing device (30) as claimed in any one of the preceding claims, characterized in that said successive determination (36) and successive positioning (37) means are provided to determine and position said new elements as and when there are selections by said user, in said representation space (40), of positions neighboring said positions occupied by the data elements already positioned.

6. The information processing device (30) as claimed in any one of the preceding claims, characterized in that said successive determination means (36) are intended to use, for the proximity order relation, at least one of the relations based on: a number of identical terms in said contents, a number of similar terms for a predefined part of said contents, a difference in dates in said contents, a number of similar graphic patterns in said contents, and a number of similar sound patterns in said contents.

7. The information processing device (30) as claimed in any one of the preceding claims, characterized in that said initial specification means (34) are provided to specify said bootstrapping element according to a user profile.

8. The information processing device (30) as claimed in any one of the preceding claims, characterized in that the means for pre-defining (33) said related area (A, A') are provided to allow said user to construct said related area.

19. The information processing device (30) as claimed in any one of the preceding claims, characterized in that the initial specification means (34) are provided, in case of definition of several related areas (A, A') by the predefinition means (33), to specify a first data bootstrapping element in one of said related areas, then to specify the other bootstrapping elements from the first bootstrapping element by means of said proximity order relation.

10. A method for processing information in a database (5), comprising the following steps:

- selection of data from the database (5) according to selection criteria,
- and arrangement of said selected data, in a representation space (40) provided for the attention of at least one user, said space (40) comprising a plurality of positions that can receive elements that are representative of the data,

characterized in that it comprises steps of:

- pre-defining at least one representation related area (A, A') within said representation space (40), formed by activated positions,
- specifying at least one data bootstrapping element for each of said related areas (A, A'),
- positioning said bootstrapping element at a bootstrapping position (P, P') in said related area (A, A') corresponding to said element,
- successively determining new data elements from at least a data element already positioned in said related area (A, A'), in accordance with at least one proximity order relation based on contents of said data,
- and automatically positioning of at least a part of new data elements in said related area (A, A') at positions neighboring the positions occupied by the data elements already positioned, if these position not be already occupied by elements already positioned,

said selection step including the initial specification and successive determination steps, and said arrangement step including the predefinition, bootstrapping element positioning and successive positioning steps.